TO THE SPECIFICATION

Please amend the specification as follows:

Please replace the paragraph on page 4, line 5, which begins with the phrase "FIGs. 2A-2H illustrates", with the following paragraphs:

- - FIG. 2A is a graphical representation of an example frequency spectrum for the signal 113 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2B is a graphical representation of an example frequency spectrum for the signals 113 and 114 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2C is a graphical representation of an example frequency spectrum for the signals 112 and 130 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2D is a graphical representation of an example frequency spectrum for the signal 122 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2E is a graphical representation of an example frequency spectrum for the signal 122 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2F is a graphical representation of an example frequency spectrum for the signal 127 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2G is a graphical representation of an example frequency spectrum for the signal 130 of FIG. 1 measured in amplitude versus frequency in MHz.

FIG. 2H is another graphical representation of an example frequency spectrum for the signal 130 of FIG. 1 measured in amplitude versus frequency in MHz. - -

Please delete the paragraph on page 7, line 11, which reads as follows: "FIGS. 2A-2H illustrate the operation of the invention."

Please replace the paragraph on page 7, lines 12-16, which begins with the phrase "In the remote unit 102 of the present invention,", with the following rewritten paragraph:

- - In the remote receiver~~unit~~ 102~~104~~ of the present invention, the bandwidth of signal that receiver~~unit~~ 102~~104~~ must transmit from remote receiver~~unit~~ 102~~104~~ to base station 106 is typically about 1 MHz when the signal is not compressed. The present invention reduces the bandwidth of the signal that needs to be transmitted to base station 106 by compressing the GPS signals to a bandwidth of less than 2 kHz. - -

Please replace the paragraph beginning on page 7, line 17, and ending on page 8, line 2, which begins with the phrase "Spectrum 112, as shown in FIG. 2A,", with the following rewritten paragraph:

- - Signal s[[S]]pectrum 113~~112~~, shown in FIG. 2A, is essentially noise with embedded GPS signals. Signal 118~~114~~, shown in FIG. 2B, is used to shift comb filter 120 by a fraction of a kHz to line the comb filter 120 up with expected signal peaks, or to adjust comb filter 120 to a new position to acquire and/or track a different satellite. The spectrum shown in FIG. 2C shows the spectrum after frequency shifting the signal to line up the signal spectral lines with the comb filter lines. 50 Hz data 130 is present in the signal. FIG. 2D shows signal 122 as a series of lines, which results from mixing signals 113~~112~~ and 114, where the 50 Hz data has been

removed by mixing with signal 114, which has matching bi-phase data, and passing the mixed

signal through comb filter 120. - -

Please replace the paragraph on page 8, lines 16-21, which begins with the phrase

"Referring again to FIG. 1, base station 106," with the following rewritten paragraph:

- - Referring again to FIG. 1, base station 106 receives signal 130 via radio link 104, and

performs a Fast Fourier Transform (FFT) 154~~132~~. A local code generator 134 also has an FFT

performed in block 136, and mixer 138 mixes the two signals 140 and 142. Resultant signal 144

then has an Inverse FFT performed in block 146, and pseudorange information is determined in

block 148. Essentially, base station 106 acts as a GPS receiver and determines the position of

remote receiver 102. - -

Please replace the paragraph beginning on page 8, line 22, and ending on page 9, line 3,

which begins with the phrase "As described above, satellite Doppler 150", with the following

rewritten paragraph:

- - As described above, satellite Doppler 150 and telemetry bits 152 can be mixed in

mixer 156~~154~~ and transmitted to remote receiver 102 via radio link 104. Further, base station

106 can transmit the position of remote receiver 102 back to remote receiver 102 via radio link

104 for use by remote receiver 102 in location services, dead reckoning, E911 situations, or other

areas or services where remote receiver 102 would need a position calculation. - -

Please replace the paragraph on page 9, lines 4-16, which begins with the phrase "The present invention reduces the complexity of", with the following rewritten paragraph:

- - The present invention reduces the complexity of the circuitry required at a remote receiver 102. There is no longer a "GPS receiver" located at remote receiver 102. Instead, there is an apparatus for removing the L1 carrier and circuitry for sending compressed GPS signals to a base station 106 for calculation of a position of the remote receiver 102. The present invention thus allows remote receivers 102, such as cellular telephones, Personal Communications System (PCS) communication devices, Personal Data Assistant (PDA) devices, mobile computers, and other mobile devices to have a small, lightweight, low power addition and still have access to GPS positioning technology. Further, since the bandwidth of the signal 130 is so small, an identification (ID) signal can be attached to the signal 130 at the remote receiver, such as a Mobile Identification Number/Electronic Serial Number (MIN/BSN), such that the base station 106 can determine which remote receiver 102 the base station 106 is calculating a position for. Such data is useful for statistical purposes, as well as a fee-for-service purpose of the base station 106 or wireless carrier that is providing position calculation services as described by the present invention. - -